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Instructional Design Model, Instructional Strategy Comparison

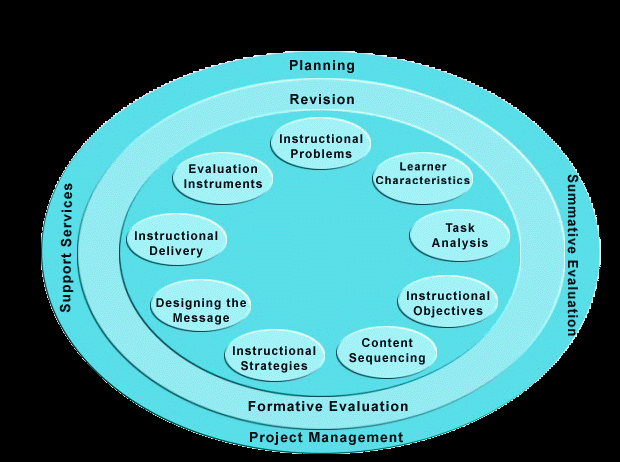
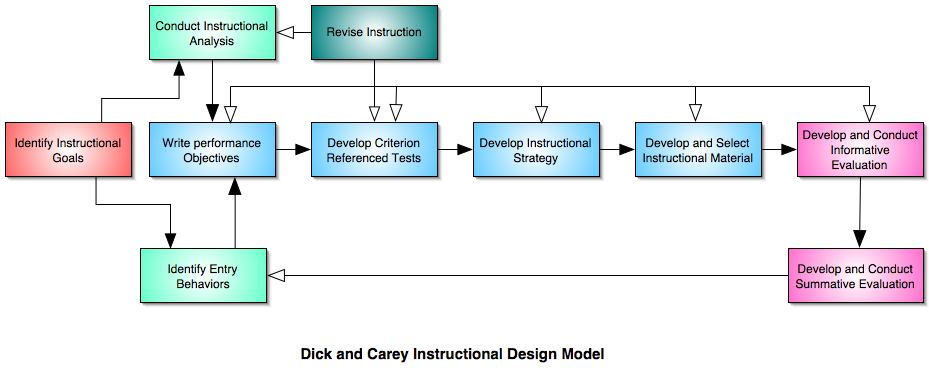
The goal of this paper is to inform the reader on instructional design model and instructional strategies. First we will define what instructional models and strategies are and then we will look at the similarities and differences between the two. Next we will compare two instructional design models; The Dick and Carey Model and The Morrison, Ross and Kemp Model. Finally we will compare two instructional strategies, discovery learning and problem-based learning.

Before one can truly identify the similarities and differences between instructional design models and instructional strategies we must first define what those two things entail. According to Martin Ryder, who writes for the University of Colorado at Denver; “models, like myths and metaphors, help us to make sense of our world. Whether derived from whim or from serious research, a model offers its user a means of comprehending an otherwise in comprehensible problem… models help us to visualize the problem, to break it down into discrete, manageable units” (Ryder, 2009). That being said a model is something an educator can use to go about answering student questions. The teacher can follow the model that will eventually lead them to the answer they are seeking. Models are based on the ADDIE design structure, which stands for; analyze, design, development, implement and evaluate, and provides the framework for the various models. It is important that the educator choose the model that is best suited to his or her needs and that leads his or her students to the answer the educator is seeking.

Instructional strategies on the other hand are “methods that are used in the lesson to ensure that the sequence or delivery of instruction helps students learn” ( http://www.cpt.fsu.edu/ ese/in/ strmain.html). Another definition states that “learning strategies determine the approach a teacher may take to achieve learning objectives”. After defining instructional design models and instructional strategies we can see that once you have chosen a model that suits your teaching style you then choose strategies that will ensure your students are learning in a way that fits your model.

After understanding what instructional models and instructional strategies are we can now look at the differences between the two. The main difference between them is that instructional models are very broad and instructional strategies are much more specific. The strategies provide your students with a precise approach to finding the answers to their questions. The instructional model could be compared to the dough of a pizza and the instructional strategies would then be the toppings that one uses to support and enhance their base or dough.

The similarities between instructional models and instructional strategies include; both are based on philosophical ideas and both deal with increasing student achievement. Both instructional models and strategies have a variety of different designs to choose from so you are able to select which ideas fit your teaching style best.

  **Morrison, Ross and Kemp Model Dick and Carey Instructional Design Model**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| A: analyze | Task Analysis |  | A: analyze | Construct Instructional analysis, identify instructional goals, identify  entry behaviors |  |  |  |
| D: design | Instructional Objectives |  | D: design | Write performance objectives |  |  |  |
| D: develop | Designing the Message |  | D: develop | Develop: Criterion Referenced Tests, Instructional Strategies,  instructional materials |  |  |  |
| I: Implement | Instructional Delivery |  | I: Implement | Identify entry behaviors |  |  |  |
| E: Evaluate | Evaluation Instruments |  | E: evaluate | Conduct-informative and summative evaluations |  |  |  |

Dick and Carey Model Rationale:

The first step in the Dick and Carey Model is to identify the instructional goals. The instructor needs to decide on what new information and skills they want the learners to master. Secondly, the Instructor must analyze the instructional goal and analyze it step by step and decide on the goals needed for the learner to master the goal. Along with this second step, goes the analysis of the learner themselves and the context in which they will learn. (Including learner’s current skills, attitudes and preferences. The third step in this design, in reference to the ADDIE model, would be writing the performance objectives. This is the design stage, in which the previously learned information can now be developed and begin to take written form as to what the learners will be able to do. In the Development stage, the instructor/designer can develop assessments according to the objectives that have been written. In this stage the designer also develops the instructional strategy that will be used to foster the student’s learning to achieve their goal. Finally in the Development stage, the designer will select their instructional materials, including guidance materials, assessments and other materials. In the Implementation section, according to the Addie model, the Dick and Carey stages would be to design and conduct the evaluation of instruction. Implementation and revision is a constant as the learning continues.

Morrison, Ross and Kemp Model Rationale:

The first step, when comparing the Morrison, Ross and Kemp educational design to the ADDIE, is the Task Analysis. This is the step in which the designer decides on the task at hand. The second part of the ADDIE model is looking at the objectives/goals that the researcher is hoping to achieve. As with ADDIE, in the Dick and Carey design, it is also called the Instructional Objectives. The next part, developing the program, would include looking at the content sequencing, the instructional strategies and designing the message, as well as developing of instruction. Implementation in this model is a cumulative process. As the design is developed and revised the designer is constantly looking at how to implement each step into the classroom. As things progress and implementation is evaluated, constant revision is taking place.

Overall, though both models have been shown to have good results, we as a group would recommend the Dick and Carey model of Educational Design. We found it to be less complicated and more in line with the ADDIE structure. The Dick and Carey model also seemed easier to implement, evaluate and adjust as needed.

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| --- | --- |
| Problem-Based Learning Model 1 | Discovery learning Model 2 |
|  |  |

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Model 1** | **Model 2** |
| Base | Constructivist | Constructivist |
| Creator | McMaster University | Jerome Bruner |
| Characteristics | Reliance on problems to drive instruction.  Problems are very complex not meant to have one answer  Students solve problems.  Teachers are guides.  Students work in groups to solve problems.  Student don’t recall information, they have a rich understand. | Interact with environment by exploring and manipulating objects.  More likely to remember concepts discovered by self.  Students are set to learn more freely and creatively.  Greater role in their own learning.  Learner draws on past experiences. |
| Assessment | Authentic, performance-based instruction | Presentations, Projects |

|  |  |  |
| --- | --- | --- |
| Learning | Inquiry-based learning | Inquiry-based learning |
| Difficulty of use: High, Medium, Low | High | Medium: availability of resources |

The two learning strategies that we focused on are problem-based learning and discovery learning. Both strategies have something to offer students and teachers in a unique way.

Discovery learning asks students to come up with questions and generate their own answers. Students play a big role on deciding what is to be learned and how to learn it. The teacher will not tell the student the content to be expected to learn, but the student will explore examples and from that learned concepts and principals. Learning situations are to be explored by the students independently and not given to the student. Some advantages of this strategy are students are actively engaged in their learning. It creates lifelong learning skills and curiosity. There is high motivation for students and it allows students to be creative and in charge of their own learning. It builds on the student’s prior knowledge and their experiences. One major disadvantage of this strategy lies on the student. If the student has no background knowledge and understandings then that student may be lost and frustrated.

To create a curriculum in a problem-based learning there are several characteristics you need to have in order to be successful. Problems are created to drive instruction fit for students. The problem needs to connect to the student and their world to more authentic opportunities. Students solve the problems with the teacher as a guide or a coach. Students are only given guides not how to approach the problem. Students take on full responsibility for group and the groups learning process. Students are free to collaborate and work with each other to solve problems. Student need to demonstrate how they solved the problem in through a performance. They simply cannot just state the answer. One disadvantage of this theory is that it may not be suitable for the younger age students. The concept might be too difficult to grasp.

Out of the two, we would recommend the Discovery Learning Educational Design due to the fact that it is more hands-on and applicable.

**References**

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